

Preliminary Amendment

AMENDMENTS TO THE CLAIMS

Claims 1-10 (canceled)

Claim 11 (new): A drug delivery system comprising:

paclitaxel, adapted to be administered to a systemic blood circulation of a patient;

one or more electrodes, adapted to be applied to a site of the patient selected from the group consisting of: a sphenopalatine ganglion (SPG), and a neural tract originating in or leading to the SPG; and

a control unit, adapted to drive the one or more electrodes to apply a current to the site capable of inducing an increase in a concentration of the paclitaxel in a brain of the patient.

Claim 12 (new): The system according to claim 11, wherein the control unit is adapted to configure the current to induce an increase in permeability to the paclitaxel of a blood-brain barrier (BBB) of the patient, so as to induce the increase in the concentration of the paclitaxel.

Claim 13 (new): The system according to claim 12, wherein the one or more electrodes are adapted for a period of implantation in the patient greater than about one month.

Claim 14 (new): The system according to claim 12, wherein the control unit is adapted to be implanted in a nasal cavity of the patient.

Claim 15 (new): The system according to claim 12, wherein the one or more electrodes are adapted to be implanted in a nasal cavity of the patient.

Claim 16 (new): The system according to claim 12, wherein at least one of the one or more electrodes comprises a flexible electrode, adapted for insertion through a nostril of the patient and to extend therefrom to the site.

Claim 17 (new): The system according to claim 12, comprising at least one biosensor, adapted to measure a physiological parameter of the patient and to generate a signal responsive thereto, wherein the control unit is adapted to modify a parameter of the applied current responsive to the signal.

Claim 18 (new): The system according to claim 17, wherein the biosensor comprises a blood flow sensor.

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Claim 19 (new): The system according to claim 17, wherein the biosensor comprises a temperature sensor.

Claim 20 (new): The system according to claim 17, wherein the biosensor comprises transcranial Doppler (TCD) apparatus.

Claim 21 (new): The system according to claim 17, wherein the biosensor is selected from the list consisting of: a chemical sensor, an ultrasound sensor, laser-Doppler apparatus, a systemic blood pressure sensor, an intracranial blood pressure sensor, a kinetics sensor, and an electroencephalographic (BEG) sensor.

Claim 22 (new): A method comprising;

administering paclitaxel to a systemic blood circulation of a patient;
selecting a site of the patient from a group of sites consisting of: a sphenopalatine ganglion (SPG) and a neural tract originating in or leading to the SPG; and
applying a current to the site capable of inducing an increase in a concentration of the paclitaxel in a brain of the patient.

Claim 23 (new): The method according to claim 22, wherein applying the current comprises configuring the current to induce an increase in permeability to the paclitaxel of a blood-brain barrier (BBB) of the patient, so as to induce the increase in the concentration of the paclitaxel.

Claim 24 (new): A drug delivery system comprising:

paclitaxel, adapted to be administered to a patient;
an odorant capable of having a neuroexcitatory effect on the sphenopalatine ganglion (SPG) that induces an increase in a concentration of the paclitaxel in a brain of the patient; and
odorant presentation apparatus, adapted to present the odorant to an air passage of the patient.

Claim 25 (new): The system according to claim 24, wherein the odorant is adapted to induce an increase in permeability to the paclitaxel of a blood-brain barrier (BBB) of the patient, so as to induce the increase in the concentration of the paclitaxel.

Claim 26 (new): The system according to claim 25, wherein the odorant presentation apparatus comprises an aqueous spray nasal inhaler.

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Claim 27 (new): The system according to claim 25, wherein the odorant presentation apparatus comprises a metered dose nasal inhaler,

Claim 28 (new): The system according to claim 25, wherein the odorant presentation apparatus comprises an air-dilution olfactometer.

Claim 29 (new): The system according to claim 25, wherein the air passage includes a nasal cavity of the patient, and wherein the odorant presentation apparatus is adapted to present the odorant to the nasal cavity.

Claim 30 (new): The system according to claim 25, wherein the air passage includes a throat of the patient, and wherein the odorant presentation apparatus is adapted to present the odorant to the throat.

Claim 31 (new): The system according to claim 25, wherein the odorant comprises an agent selected from the list consisting of: propionic acid, cyclohexanone, and amyl acetate.

Claim 32 (new): The system according to claim 25, wherein the odorant comprises an agent selected from the list consisting of: acetic acid, citric acid, carbon dioxide, sodium chloride, and ammonia.

Claim 33 (new): The system according to claim 25, wherein the odorant comprises an agent selected from the list consisting of: menthol, alcohol, nicotine, piperine, gingerol, zingerone, allyl isothiocyanate, cinnamaldehyde, cuminaldehyde, 2-propenyl/2-phenylethyl isothiocyanate, thymol, and eucalyptol.

Claim 34 (new): The system according to claim 25, wherein the paclitaxel is mixed with the odorant.

Claim 35 (new): The system according to claim 25, wherein the paclitaxel is adapted to be administered using a route of administration selected from the list consisting of: intravenous administration, intraperitoneal administration, and intramuscular administration.

Claim 36 (new): The system according to claim 25, comprising a local analgesic mixed with the odorant

Claim 37 (new): A method comprising:

administering paclitaxel to a systemic blood circulation of a patient; and.

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presenting, to an air passage of the patient, an odorant capable of inducing an increase in a concentration of the paclitaxel in a brain of the patient.

Claim 38 (new): The method according to claim 37, wherein presenting the odorant comprises presenting an odorant capable of inducing an increase in permeability to the paclitaxel of a blood-brain barrier (BBB) of the patient, so as to induce the increase in the concentration of the paclitaxel.